

WE CLAIM:

1. A retaining wall block suitable for forming a retaining wall by stacking multiple blocks into successive overlying courses of blocks, said retaining wall block comprising:
 - (a) top and bottom surfaces substantially parallel to each other;
 - (b) a front surface connecting the top and bottom surfaces;
 - (c) a back surface opposite the front surface;
 - (d) first and second side surfaces connecting the top and bottom surfaces, wherein the first side surface forms a first angle with the front surface, and the second side surface forms a second angle with the front surface, wherein the first and second angles are less than 90 degrees;
 - (e) a groove in the bottom surface, the groove extending from the first side surface to the second side surface, the groove having a depth and a width;
 - (f) a tongue set comprising one or more tongues projecting from the top surface, the tongue set comprising a front-facing surface set comprising one or more front-facing surfaces, and the tongue set comprising a rear-facing surface set comprising one or more rear-facing surfaces, the rear-facing surface set comprising a first curved section having a first radius and a second curved section having a second radius, wherein the first and second curved sections are convex as viewed from the back surface and wherein the first and second curved sections have a first and a second apex respectively, wherein a first midpoint is defined halfway between the first apex and the front-facing surface set of the tongue set along a line normal to the front face of the block, and a second midpoint is defined halfway between the second apex and the front-facing surface set of the tongue set along a line normal to the front face of the block; and
 - (g) the first radius is greater than one fourth the distance between the first and second side surfaces measured along a line including the first and second midpoints and the first radius is less than 1000 inches, and the second radius is greater than one

fourth the distance between the first and second side surfaces measured along the line including the first and second midpoints and the second radius is less than 1000 inches.

2. The retaining wall block according to claim 1 wherein the front surface is a substantially planar surface.
3. The retaining wall block according to claim 1 wherein the first and second angles are between 70 degrees and 90 degrees.
4. The retaining wall block according to claim 1 wherein the first and second angles are between 80 degrees and 82 degrees.
5. The retaining wall block according to claim 1 wherein the tongue set comprises a single tongue.
6. The retaining wall block according to claim 1 wherein the retaining wall block is made from wet cast concrete.
7. A face form for use in a concrete block form for creating a desired shape on the face of a block, the face form comprising:
 - (a) a bottom surface textured to the desired shape;
 - (b) a wall coupled to the bottom surface, the wall comprising first and second end walls coupled to first and second side walls such that the first and second end walls are substantially perpendicular to the first and second side walls; and
 - (c) a first anchor rail projecting from the first side wall and a second anchor rail projecting from the second side wall, wherein the first and second anchor rails are configured so as to be capable of being slidably received by a concrete block form to thereby retain the face form in the concrete block form.

8. The face form according to claim 7 wherein the bottom surface is substantially planar.
9. The face form according to claim 7 wherein the wall is substantially perpendicular to the bottom surface.
10. The face form according to claim 7 wherein the first anchor rail and the second anchor rail each comprise a rectangular shaped protrusion.
11. The face form according to claim 7 wherein the first anchor rail and the second anchor rail comprise urethane.
12. A block form for forming retaining wall blocks comprising:
 - (a) a bottom surface configured for slidably receiving a face form, the bottom surface having a first edge and an oppositely disposed second edge;
 - (b) a first anchor rail clamp coupled to the first edge of the bottom surface, and a second anchor rail clamp coupled to the second edge of the bottom surface wherein the first and second anchor rail clamps are configured to slidably receive a face form and retain such a face form adjacent the bottom surface, wherein the area between the bottom surface and the first and second anchor rail clamps comprises a face form receiving area; and
 - (c) a generally upright four sided enclosure comprising first and second side walls and first and second end walls, wherein the four sided enclosure is configured to be combined with the bottom surface and a face form to form an enclosed space for receipt of moldable concrete, and wherein at least one of the first and second side walls and first and second end walls is configured to be movable from its upright position to a position in which the face form receiving area is accessible for sliding receipt of a face form.

13. The block form according to claim 12 wherein the bottom surface is a horizontal planar surface.
14. The block form according to claim 12 wherein the first anchor rail clamp and the second anchor rail clamp each comprise a first planar portion and a second planar portion perpendicular to the first planar portion.
15. The block form according to claim 12 further comprising a supporting structure coupled to the bottom surface.
16. The block form according to claim 15 wherein the first and second end walls comprise first and second end hinged doors hingedly coupled to the supporting structure and wherein the first and second side walls comprise first and second side hinged doors hingedly coupled to the supporting structure.
17. A block form for forming retaining wall blocks comprising:
 - (a) a supporting structure;
 - (b) at least four safety stops attached to the supporting structure;
 - (c) a bottom surface coupled to the supporting structure;
 - (d) four hinged doors having a molding position in which the four hinged doors form a molding cavity between the four hinged doors and the bottom surface, each hinged door having two hinge arms hingedly connected to the supporting structure and each hinge arm having a lower edge which faces the supporting structure; and
 - (e) wherein the lower edge of at least one hinge arm from each door has a stop engaging surface substantially aligned with one of the at least four safety stops wherein each of the four hinged doors has an open position that is different from the molding position in which rotation of each of the four hinged doors is stopped by the engagement of the respective stop engaging surface with the respective safety stop.

18. The block form according to claim 17 wherein at least one safety stop is removably attached to the supporting structure.
19. The block form according to claim 18 wherein one or more of the at least four safety stops may be removed from the block form without affecting the operation of the other of the at least four safety stops.
20. A block form for forming retaining wall blocks comprising:
 - (a) a supporting structure;
 - (b) a substantially horizontal bottom surface coupled to the supporting structure;
 - (c) four hinged doors having a molding position in which the four hinged doors form a molding cavity between the four hinged doors and the bottom surface, each hinged door having a top and a bottom, wherein the bottom of each hinged door has two hinge arms hingedly connected to the supporting structure, and wherein a first hinged door of the four hinged doors is adjacent and substantially perpendicular to a second hinged door of the four hinged doors;
 - (d) a first member coupled to the top of the first hinged door and a second member coupled to the top of the second hinged door, wherein the first member defines a first hole and the second member defines a second hole; and
 - (e) a safety latch comprising first and second substantially parallel rods connected by a connecting section, wherein the safety latch is configured to fit into the first and second holes of the first and second members when in the molding position by positioning of the first rod into the first hole and the second rod into the second hole, wherein the first and second hinged doors are held in substantially the molding position.
21. The block form according to claim 20 wherein the first and second substantially parallel rods and the connecting section of the safety latch are an integral member.

22. The block form according to claim 20 wherein the angle between the first rod and the connecting section is substantially 90 degrees.
23. The block form according to claim 22 wherein the angle between the second rod and the connecting section is substantially 90 degrees.
24. The block form according to claim 20 wherein the first and second members comprise substantially flat plate members welded to the respective hinged doors.
25. A method of molding retaining wall blocks comprising the steps of:
 - (a) providing a block form comprising:
 - (i) a supporting structure;
 - (ii) a bottom surface secured to the supporting structure;
 - (iii) first, second, third and fourth hinged doors having a molding position in which the first, second, third and fourth hinged doors form a molding cavity with the bottom surface, each hinged door having a top and bottom, wherein the bottom of each hinged door has two hinge arms hingedly connected to the supporting structure, and wherein the first hinged door is adjacent and substantially perpendicular to the second hinged door and the third door is adjacent and substantially perpendicular to the second hinged door, and wherein the fourth hinged door is adjacent and substantially perpendicular to the third hinged door and the first hinged door, and wherein each of the hinged doors has an inside surface and an outside surface;
 - (iv) at least one locking mechanism coupled to two or more of the hinged doors, the at least one locking mechanism having an unlocked position and a locked position wherein the first, second, third and fourth hinged doors are maintained in their molding position when the at least one locking mechanism is in its locked position;
 - (b) rotating the first hinged door and second hinged door into substantially the molding position;

- (c) removably securing the first hinged door to the second hinged door so as to maintain the first and second hinged doors in the molding position;
- (d) rotating the third and fourth hinged doors into substantially the molding position;
- (e) moving the at least one locking mechanism into its locked position; and
- (f) pouring moldable concrete into the molding cavity.

26. The method according to claim 25 wherein first hinged door defines a hole and the second hinged door defines a second hole, wherein the step of removably securing the first hinged door to the second hinged door comprises providing a safety latch having a first and second parallel rods and a connecting section, and placing the first rod in the first hole and the second rod in the second hole.

27. A block form for forming retaining wall blocks comprising:
- (a) a supporting structure;
 - (b) a substantially horizontal bottom surface coupled to the supporting structure;
 - (c) four hinged doors having a molding position in which the four hinged doors form a molding cavity between the four hinged doors and the bottom surface, each hinged door having a top and a bottom, wherein the bottom of each hinged door has two hinge arms hingedly connected to the supporting structure, and wherein a first hinged door of the four hinged doors is adjacent and substantially perpendicular to a second hinged door of the four hinged doors;
 - (d) a first protrusion coupled to the first hinged door, the first protrusion having a substantially planar first prying surface; and
 - (e) a second protrusion coupled to the second hinged door, the second protrusion having a substantially planar second prying surface wherein the first and second prying surfaces form a gap of between 0.1 inches and 2.0 inches when the first and second hinged doors are in the molding position.

28. The block form according to claim 27 wherein the gap between the first and second prying surfaces is between 0.5 and 1.5 inches.
29. The block form according to claim 27 wherein the first and second substantially planar prying surfaces are substantially parallel to the first hinged door and substantially perpendicular to the second hinged door.
30. The block form according to claim 29 wherein the first protrusion further comprises an angled guide surface wherein the angle between the angled guide surface and the first planar prying surface, such angle going through the first protrusion, is between 110 degrees and 160 degrees.
31. The block form according to claim 30 wherein the angle between the angled guide surface and the first planar prying surface, such angle passing through the first protrusion is between 130 degrees and 140 degrees.

32. A method of using a face form for forming two blocks of reversed front surface ornamentation, the method comprising the steps of:

- (a) providing a block form comprising:
 - (i) a supporting structure;
 - (ii) a substantially horizontal bottom surface secured to the supporting structure;
 - (iii) four hinged doors having a molding position in which the four hinged doors form a molding cavity between the four hinged doors and the bottom surface, each hinged door having a top and a bottom, wherein the bottom of each hinged door has two hinge arms hingedly connected to the supporting structure, and wherein a first hinged door of the four hinged doors is adjacent and substantially perpendicular to a second hinged door of the four hinged doors;
- (b) providing a face form in a first orientation on the bottom surface of the block form;
- (c) pouring moldable concrete into the block form to form a first block;
- (d) removing the first formed block from the block form;
- (e) slidably removing the face form from the block form;
- (f) slidably inserting the face form along the bottom surface of the block form in a second orientation relative to the bottom surface; and
- (g) pouring moldable concrete into the block form to form a second block.